

REMARKS

By this amendment, Applicants have amended claim 1 to correct the informality noted by the Examiner in numbered section 4 of the Office Action and have amended claim 6 to correct the antecedent basis problems noted by the Examiner in numbered section 8 of the Office Action. Claim 20 has been canceled without prejudice or disclaimer. Applicants have also amended the abstract of the disclosure to delete the word "invention" as required by the Examiner in numbered section 3 of the Office Action. Claim 14 has been amended to recite that the insulating layer is applied by spraying or molding.

As to the objection to claim 11 in numbered section 5 of the Office Action and the rejection of claim 21 in numbered section 9 of the Office Action, it is noted these claims were amended to eliminate the problems noted by the Examiner in the Preliminary Amendment filed April 12, 2004. Should the Examiner require a copy of a Preliminary Amendment, he is requested to contact the undersigned to obtain a copy.

In view of the amendments to the abstract, reconsideration and withdrawal of the objection to the abstract in numbered section 3 of the Office Action are requested.

In view of foregoing amendments to claim 1 and the amendments to claim 11 in the Preliminary Amendment, reconsideration and withdrawal of the objections to claims 1 and 11 in numbered sections 4 and 5 of the Office Action are requested.

In view of the foregoing amendments to claim 6, and the cancellation of claim 20, as well as the amendments to claims 21 in the Preliminary Amendment, reconsideration and withdrawal of the rejections to claims 6, 20 and 21 under 35 U.S.C. 112, second paragraph, in numbered sections 6-9 of the Office Action are requested.

Claims 1-5 and 8-11 stand rejected under 35 U.S.C. 102(b) as alleging being anticipated by U.S. Patent 4,990,748 to Starck. Applicants traverse this rejection and request reconsideration thereof.

The rejected claims relate to a device for receiving ceramic heating elements (PTC elements, cold conductors) in a heating device, the device having an insulating frame and at least one contact plate held in the insulating frame on which can be placed the heating elements. According to one aspect of the present invention, it is set forth in the rejected claims, the contact plate and frame are frictionally connected.

The patent to Starck discloses an apparatus for heating gases, particularly air, with a heating unit having a mounting part, at least one PTC component, at least one insulating frame part surrounding the latter, at least one contact plate and at least one insulating support. The PTC component is surrounded by the frame part being inserted in the mounting part and, on at least one flat side, rests a contact plate and is covered by an insulating support.

The Examiner alleges the contact plate 22 of Starck to be frictionally connected to the frame, the Examiner referring to column 5, lines 63-66 of Starck. The following is disclosed at column 5, lines 63-66 of Starck:

The PTC components 31 are then inserted in frame part 12 from the side remote from contact plate 22 and are held by contact plate 22 firmly connected to frame part 12, so that it is not possible for them to drop out.

This portion of Starck is mainly concerned with how the PTC components are inserted in the frame part 12. There is absolutely no disclosure at this or any other portion of Starck indicating that the contact plate 22 and the frame part 12 are

frictionally connected. To the contrary, as described at column 4, line 45 et seq. "[i]n the end region 23 of frame part 12 remote from the end face 17 it is firmly connected thereto, e.g., riveted thereto by a rivet 24." Further, it is described that, "[o]n its end face 27 remote from connecting tongue 26, contact plate 22 engages under web 21 of the clip 18 and is thus held by the latter at the end 27.¹¹ Thus, the Starck patent does not disclose a device for receiving ceramic heating elements in which the contact plate end frame are frictionally connected, as presently claimed. Accordingly, the Starck patent does not anticipate claims 1-5 and 8-11.

Claims 6, 7 and 12 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Starck in view of Tellier et al. (FR 002826829). Applicants traverse this rejection and request reconsideration thereof.

The Examiner alleges the French patent document to Tellier et al. to disclose a heating device having longitudinal struts 17b and bulges 19 attached to the heating bar 10 and the bar seated in a tube 18. However, it is submitted this patent does not remedy any of the basic deficiencies of Starck noted above. Accordingly, claims 6, 7 and 12 are patentable for at least the reasons noted above with respect to claims 1-5 and 8-11.

Claim 13 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Starck in view of U.S. Patent 4,835,370 to Van Bokestal et al. Applicants traverse this rejection and request reconsideration thereof.

The Examiner alleges the Van Bokestal et al. patent discloses a PTC heating device having an insulating polymer ceramic 5 covering a contact plate 4. It is submitted the Examiner's allegation is in error. Element 5 of Van Bokestal et al. is a

layer consisting of a silicone elastomer (see, column 2, line 52 of Van Bokestal et al). The casing 6 is molded, for example, from a vulcanized silicon rubber which is filled with magnesium oxide and silicon dioxide; see, column 2, lines 48-50 of Van Bokestal et al. Thus, the Van Bokestal et al. patent does not disclose a contact plate covered by a polymer ceramic or ceramic cover layer. A polymer ceramic is a ceramic produced by condensation of organometallic compounds into merely inorganic materials by proper thermal treatment under a controlled atmosphere. Two publications, i.e., by Weinmann et al and An et al., describing polymer ceramics, also called precursor-derived ceramics (PDC) are attached. Thus, in addition to not remedying the basic deficiency noted above with respect to Starck, the Van Bokestal et al. patent does not disclose the subject matter set forth in claim 13.

Claims 14-21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Starck in view of Van Bokestal et al.

Claim 14 has been amended to recite a device for receiving ceramic heating elements in which an insulating layer is applied by spraying or molding to a side of the contact plate remote from the reception side for the heating elements.

According to Van Bokestal et al. the casing 6, together with a layer 5 on one side and the metal bodies 3 and 4 (contact electrodes), as well as the resistor bodies 1, 2, are separately manufactured as discrete parts. In order to manufacture the heating element as shown in Van Bokestal et al., the resistor bodies 1 and 2 are inserted between the metal bodies 3 and 4 and all parts are held together in a sandwich like form and are shifted from the open end of the molded casting into the casting 6.

Accordingly, independent from the question of what the molded part 6 and the

layer 5 are made, the Van Bokestal et al. patent does not show the feature of applying any insulating material to a metal body by spraying on or molding, as claimed in amended claim 14. This feature is also not known from Starck; therefore, amended claim 14 and claims 15-21 are not obvious over Starck and Van Bokestal et al.

Claim 22 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Starck in view of Van Bokestal et al. and further in view of U.S. Patent 4,334,141 to Roller et al. Applicants traverse this rejection and request reconsideration thereof.

The patent to Roller et al. discloses a combined electric heating and vessel and support plate for a beverage preparation device but does not remedy any of the basic deficiencies noted above with respect to Starck and Van Bokestal et al. Accordingly, claim 22 is patentable over the proposed combination of references at least for the reasons noted above.

In view of the foregoing amendments and remarks, favorable reconsideration and allowance of all of the claims now in the application are requested.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 321.43756X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP



Alan E. Schiavelli
Registration No. 32,087
(703) 312-6600

AES/at